

POPULATION TODAY

Vol. 19, No. 2 February 1991

A8750-1

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Robert J. Bennett



This rural child is likely to have younger parents than city children (see page 6).

PRB

A publication of the Population Reference Bureau, Inc.

FROM THE EDITOR'S DESK

A couple of issues ago, a young PRB staffer came to me with a complaint. A PT Survey Report she'd read in the galley stage mentioned douching among other "traditional methods" of family planning.

"Douching is *not* a method of contraception," she objected. "It doesn't work." Nor was she comfortable with other items on the list of traditional methods, such as withdrawal (*coitus interruptus*) and breastfeeding.

From the perspective of a young women living in the United States in the 1990s post-pill, post-sexual-revolution era, those methods may seem like no birth control at all. But they do help to lower fertility and, in some countries, they account for more fertility reduction than the use of modern methods.

Indeed, within many developing

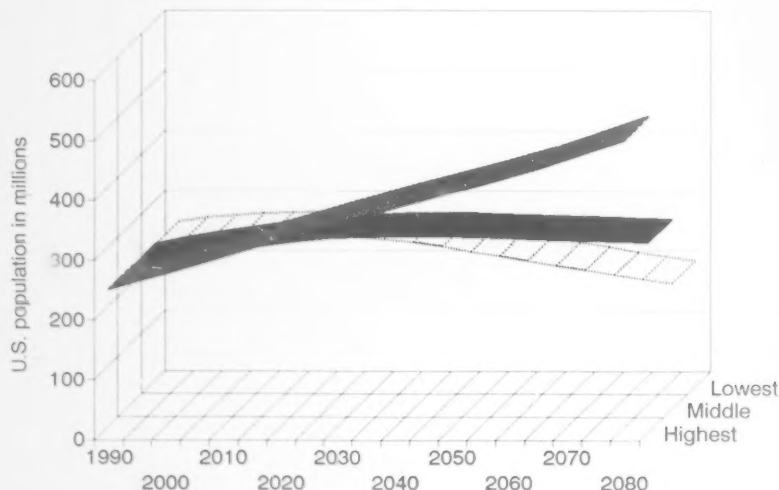
countries, use of traditional methods is an important indicator of both the desire to limit family size and a potential demand for more effective methods. The attempt to use a traditional method demonstrates a desire to control one's own fertility. Where this motivation exists, couples are more likely to seek out modern, more effective methods if traditional methods fail.

Our staffer's strong reaction, however, is one example of how differently population issues can present themselves in developed and developing countries. Which contraceptive options are culturally acceptable or even technologically feasible in the two contexts may seem worlds apart. We need sensitivity to such differences to close the gap.

—Susan Kalish

SPEAKING GRAPHICALLY

Ribbon Graphs—Ugh!



U.S. population projections: Lowest, middle, and highest series, 1990-2080

We have seen the ribbon graph, a new option in several software packages, and we do not like it. For example, take the Census Bureau projections for the U.S. population, above. Could you guess that the highest projection for the year 2080 (green ribbon) is 501 million? The width of the ribbon itself suggests a range of values of about 30 million. Graphic purists object even to three-dimensional "shadows" on a graph; with the ribbon graph, the shadow becomes the substance. Even more quirky, the highest point of the ribbon lies quite a bit below the dotted guideline connected to the 500 million point on the vertical scale.

POPULATION TODAY

VOL. 19, NO. 2

February 1991

POPULATION TODAY, the newsmagazine of population and demography, is published 11 times a year (a combined issue in July/August) by the Population Reference Bureau, Inc., founded in 1929, a nonprofit organization engaged in the dissemination of objective population information. The views and opinions of POPULATION TODAY's contributors are their own and do not necessarily reflect those of PRB.

Editor: Susan Kalish

Demographic Editor: Carl Haub

Book Review Editor: Nazy Roudi

Contributing Editors: Alex de Sherbinin;

William P. O'Hare; Kimberly Crews

Consulting Editors: Thomas W. Merrick;

Winthrop P. Carty; Eileen Hanlon; Nancy

Johnson; Machiko Yanagashita; Nancy

Yinger

Director of Publications: Carol J. De Vita

Production Coordinator: Martha Herr

Production Assistant: Elizabeth Morgan

Circulation Director: Jacki Majewski

Editorial and Circulation Offices:

Population Reference Bureau, Inc.

1875 Connecticut Ave., N.W. Suite 520

Washington, D.C. 20009-5728

(202)483-1100

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Back Issues: Back issues of POPULATION TODAY and its predecessor INTERCOM are available in limited quantities from PRB for \$2.00 per copy.

Mailing: Printed in Washington, D.C. Mailed nonprofit postage rate in the United States; printed matter surface rate to Canada, Mexico, and to foreign subscribers.

Address Changes: Send current PRB address label and new address; please allow eight weeks for change.

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ISSN 0749-2448

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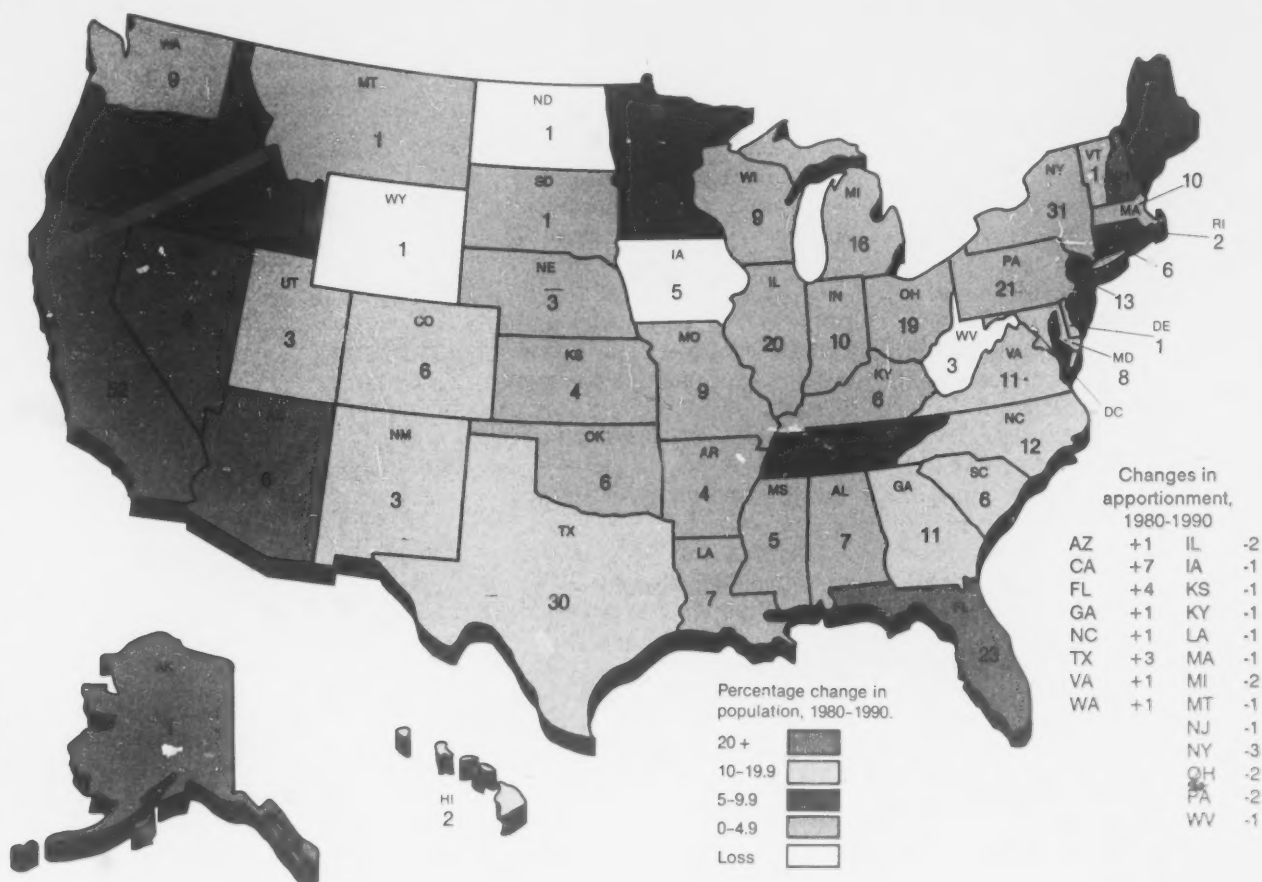
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Recycled Paper

Census: 248,709,873 U.S. Residents

Apportionment of Seats in the House of Representatives and State Population Changes, 1980-1990



It's done! 248,709,871, 248,709,872, 248,709,873. That's it, the 1990 Census is over. There will be adjustment debates and undercount controversies, but there will be no more counting. During the 1980s, the U.S. population grew by 22.2 million, up from 1980's 226,504,825—an increase of 9.8 percent. The South and West, or "Sunbelt," continued to outpace the national average: The South grew by 13.4 percent, and the West by 22.3 percent. Meanwhile, the Northeast logged only a 3.4 percent gain and the Midwest a lowly 1.4.

The "Big Three"

California far outstripped the growth of any other state from 1980 to 1990, increasing by a phenomenal 6.1 million. The numbers added to Califor-

nia's population alone would qualify as the nation's 13th largest state! The Golden State's demographic dominance was shared by both Florida and Texas. The lion's share, perhaps three-fourths, of California's growth was the result of immigration, not of people moving to California from other states.

Taken together those three states (the "Big Three," we'll call them) accounted for over half of national population growth in the 1980s. As impressive as that growth is, it is only continuing a pervasive pattern of the post-World War II period. Over the four-decade period from 1950 to 1990, 40 percent of total U.S. population growth took place in the Big Three. Thus, the dominance of the three fastest-growing states is not a new development, but a long-term trend that has simply intensified.

During the 1980s, four states lost population: Iowa (-4.7 percent), North Dakota (-2.1), West Virginia (-8.0), and Wyoming (-3.7). The District of Columbia also experienced a net loss for the decade, -4.8 percent. Note that two of the states where growth declined, Wyoming and West Virginia, are part of the Sunbelt.

Nevada's increase of 50.4 percent easily took the national "fast growth" crown. That state's population has shot up to 1,201,833 from a mere 160,083 in 1950, the Census Bureau reports. Several other states experienced more than 20 percent growth since 1980: Alaska (37.4), Arizona (34.9), and New Hampshire (20.5). Only one other state in addition to the Big Three added more than 1 million population: Georgia grew by 18.6 percent from 5,464,265

Continued on next page

U.S. Census

Continued from previous page

in 1980 to 6,478,216. (See *Take A Number*, p. 10 for state-by-state counts.)

Sunbelt Growth

What do these state-level census returns tell us? There are no real surprises in overall patterns of growth and we certainly wouldn't expect any at the state level. The 1990 Census has generally confirmed that the move to the Sunbelt has continued. At present, just over 55 percent of Americans live in either the South or West, a reversal of the situation 1950, when 55 percent lived in the Northeast and Midwest. Growth or decline trends just becoming evident in the late 1980s, however, may not be reflected in the 10-year census data. For example, although Texas was a growth leader in the 1980s, its growth in the second half of the decade is estimated to have tapered off. Declines in the fortunes of the oil industry have hurt Texas and other gulf states. To the North, growth standout New Hampshire has begun to feel the effects of a downturn in electronics and defense-related industries. Thus, not all of the trends observed from 1980 to 1990 may predict the shape of things to come in the 1990s or beyond.

Count Trails Estimate

The overall census count is notable for at least one thing: it is somewhat lower than the figure that had previously been estimated for April 1, 1990, 250.2 million. For two censuses now, counts have been noticeably different from precensal estimates. The 1980 Census was higher than expected (by about 4.6 million), and the 1990 count was somewhat lower. These differences may have as much to say about the nature of making population estimates in a country as large and diverse as the United States as they do about census accuracy.

Nationally, the census results came in about 1.5 million short of the precensal estimate. How far away from their anticipated counts did different states and regions come in? By projecting the last Census Bureau state

estimate for July 1989 forward nine months to the census date, we can examine these state and regional differences. Of the four main Census regions, only the West was reported with a larger population than estimated. Most state counts were lower than expected, including every state in the Midwest. Illinois had the largest shortfall; its count of 11,430,602 was about 260,000 low. Pennsylvania was 190,000 low. California proved an exception even in this race, as its count bucked the national trend and was about 140,000 higher than predicted. Next in line with a higher-than-expected count was, surprisingly enough, Massachusetts with 86,000 more Bay Staters than anticipated. These comparisons are interesting but, of course, they cannot be used as evaluation of the census.

Sturm und Drang

The *sturm und drang* over the census count began earlier than usual this time around with the Census Bureau's release of not-quite-complete counts for local review. The total of those early numbers was only about 246 million—4 million shy of the estimate of 250 million—which caused quite an outcry. Now, the full process is complete, including the local review of small area counts. The final count of 248.7 million is quite a bit closer to that earlier 250 million estimate.

When the new count was released between Christmas and New Year's, a second furor was caused by the fact that the count was about 4 million short of 253.8 million, now said to have been a new estimate for the same date. At this point, the Census Bureau must have felt that it was chasing a moving target.

The new "target" figure turns out to be a hypothetical figure developed by the Census Bureau. It is derived by applying estimated undercount factors to the 1980 Census; making corrections for birth registration data, particularly for black males; and, in a sense, developing an idea of the "true" national population figure. But it would still be inappropriate to use any such figure as a benchmark of census completeness.

To complicate matters a bit further, the numbers released by the Bureau

in late December were actually counts used for apportionment, which include armed forces and government employees reallocated to their home of record. That number was 249,022,783 and it did not include the population of the District of Columbia, which has no congressional seats and thus no apportionment count.

Counts for cities and counties will not be available until after we go to press, along with local area numbers for state redistricting, which will be released as they are ready. All redistricting data will be out by April 1. Then, by July 15th, the Secretary of Commerce must decide whether to adjust the census count itself. Stay tuned.

—C.H.*

PRB's new U.S. Data Sheet Released

PRB's just-released United States Population Data Sheet (ninth edition) displays key demographic measures for states, regions, and the country as a whole. The data sheet not only details changes in population between 1980-1990 (incorporating data from the 1990 U.S. Census) but also provides projections to the year 2010 and historical comparisons back to 1890. This colorful, readable, 18 1/2 x 24 inch wall chart is an essential teaching tool and an invaluable reference resource. Cost: \$3 each; 2-10, \$2.75 each; 11-50, \$2.50 each; 51 or more, \$2.25 each. Prepay orders of less than \$50 by check, Master Card, or Visa. Add \$1.00 or 3 percent of the cost of the publication (whichever is greater) for postage and handling. Contact: Circulation Department, PRB, 1875 Connecticut Avenue, N.W., Suite 520 Washington, DC 20009 (202) 483-1100

"Sudah dicensus?"—Census of Indonesia

Complications seem to plague census takers, wherever they are. Consider the recent census of Indonesia, which, as a guest of the Central Bureau of Statistics, I observed first hand this fall.

Census planners in this scattered island nation of the Pacific stipulated that most people were to be enumerated in their usual residence, *de jure*, defined as a place where they had lived, or intended to live, for at least six months. Supposedly, this left *de facto* enumeration to such relatively peripheral groups as nomadic and homeless persons, and ships' crews. The scheme, however, was to some extent undermined by preexisting designations of official *de jure* residence on ID cards, which sometimes misstate the actual abode of Indonesian citizens.

The basic system of identification is the *kartu keluarga* (KK or "family card"). The KK is a local register of all members of the household, including head, spouse, children, other relatives, and servants. The KK is the basis for procedures for formally changing residence, but many urban dwellers continue to be listed on the KK at their rural parental home, because it is difficult to process a formal change.

The *kartu tanda penduduk* (KTP or "population card"), which all adult citizens are required to carry, is based on the information on the KK. Indonesians may carry other forms of ID as well: a government employee card, the worker's card, or the birth registration, for example. The information on these may not agree with that on the KTP.

A number of people I met in the capital city of Jakarta were obviously long-term residents, living in workplaces, kiosk shops, or restaurants. But as they pointed out, they could not be counted there since they were not allowed to register their KTP in the crowded city.

Several factors combined to make census officials (400,000 were trained) somewhat overly reliant on ID cards. For one thing, the definition of residence left it unclear how people should be enumerated if they have not and do not intend to live in their current place of residence for six months. In addition,

the census takers were instructed to interview household heads or, when this was not possible, other responsible residents. Because enumerators worked mainly during the day, however, it was often not possible to meet a householder. While the emphasis was on personal interviews, there is no record of what proportion of interviews occurred with household heads as opposed to other members, or even non-members, of the household.

On a number of occasions I observed that when interviewers relied on non-family members or neighbors for information, the immediate reaction was to reach for the KK.

During my visit in the middle of the census enumeration, my question "Sudah dicensus?" ("Have you been 'censused?'"") brought some strange responses. "Sure, five months ago" or "Yes, last year at work." It was evident that the term *sensus* in Indonesian covers a lot more than the official decennial count. People talk of the *sensus* for the election, for the population registration checks, the regular listings of the local government, the household visits of health workers for family planning or other programs, village welfare programs, and the listing for the land and building tax.

In Indonesia (and probably in many other developing countries), the government may be approaching diminishing returns in promoting numerous, confusing, and potentially contradictory attempts to count the citizenry.

As Indonesian society becomes more mobile, people spend extended periods away from original family homes, going to school, seeking work, or merely living in new "unofficial" homes. They are essentially modern nomads, round pegs in the square holes of *de jure* enumeration, but potentially not included in the actual listing either.

To what extent might such prob-

World Bank/Ray Whelan



Jakarta neighborhood: Part of the urban undercount?

lems have affected the counts? If people are excluded from urban counts and the counts of their official homes, an overall undercount would result. Most likely, however, would be an undercount in urban (and overcount in rural) areas. That would have serious consequences for estimates of the needs for housing, water, sanitation, and welfare facilities. Similar urban undercounts have emerged in Mexico and the Philippines (Haupt 1990; Molina 1990; de Villa 1990).

These, however, are not reasons for rejecting the census results—rather, for being especially open and careful in analysis (West and Fein 1990). The soon-to-be published 1990 figures are eagerly anticipated, for they will provide us with the most thorough population count to date in the most populous country of Southeast Asia.

—Terence H. Hull

Terence H. Hull is senior research fellow in the Department of Political and Social Change, Australian National University.

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DEMOGRAPHER'S PAGE

Gonna Get Married: Family Formation in Rural Areas

by William P. O'Hare

"Gonna get married,
You know, my name she'll carry..."

Songs with a country twang have long celebrated young love, marriage, and parenthood in rural America. But what do we know about the actual patterns of marriage and childbearing of today's rural youth?

This article explores the family formation experiences of rural youth in the United States. It presents, as it were, a statistical class reunion portrait of the graduating class of 1980. The imaginary reunion takes place six years later, in 1986, when the graduates had reached their mid-20s. If, at the reunion, the graduates from rural high schools compared notes with those from urban high schools on how their personal lives were unfolding—they would probably find themselves discussing the points made in this article.

The data come from the *High School and Beyond* data set, a large, nationally representative longitudinal survey carried out by the U.S. Department of Education in the 1980s. For the purposes of this article, youth were considered *rural* if they graduated from a high school located outside a metropolitan area, as defined by the U.S. Census Bureau. They were considered *urban* if they graduated from a high school—inner city or suburban—that lay within a metro area. Approximately 2,100 counties across the nation are nonmetropolitan. The sample included 6,736 people from urban areas and 2,637 from rural areas. It represents the early marital and childbearing experiences of the 3 million people who

graduated from U.S. high schools in 1980.

Looking at urban and rural youth together, about half (53 percent) of the graduating class of 1980 were unmarried and childless six years later. Forty-one percent were married, with about equal numbers married but childless (21 percent) or married with at least one child (20 percent). Six percent were unmarried and had at least one child.

Rural and Urban Patterns

There were real differences in the timing of marriage and parenthood for the rural and urban members of the class of 1980 (see Figure 1). Rural young people were more likely to be married and have children than their urban counterparts. Among graduates of rural high schools, 50 percent were married six years later, as opposed to just 37 percent of those from urban high schools. About one-fourth (26 percent) of the rural group, but only 17 percent of the urban group, was married and had at least one child. Only 44 percent of the rural group were unmarried and childless. In contrast, 57 percent of the urban group were in that situation.

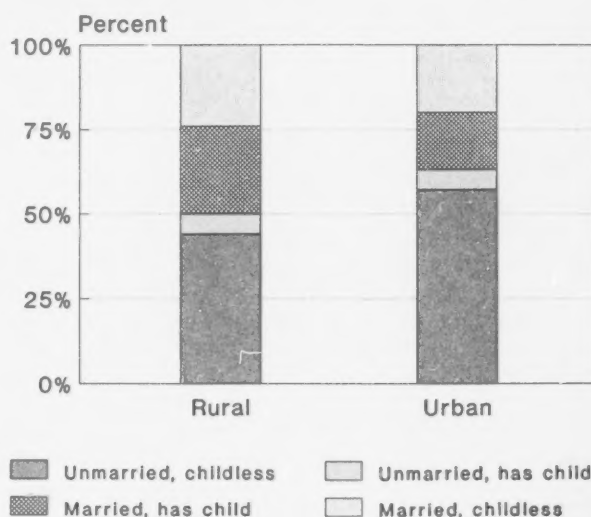
Even though the rural group had more children six years after high school graduation, they will not necessarily have larger families than



Young family in rural Minnesota.

the urban group. Census Bureau studies show that, even though rural women tend to start having children earlier, they end up with no more children than urban women (an average of 2.1 children). This finding of earlier family formation, however, seems to contradict a leading fertility theory that suggests that people postpone marriage and have fewer children in the face of economic uncertainty. Rural youth certainly faced a dimmer economic picture than their urban counterparts in the early 1980s.

Figure 1. Marriage and Parenthood for the High School Graduating Class of 1980: Six Years Later (1986)



Source. PRB analysis of *High School and Beyond* data set from the U.S. Department of Education.

Between 1979 and 1988 the real mean earnings of young (16 to 34) rural workers dropped from \$14,176 to \$12,569: a decline of 11 percent. During this period, the real mean earnings for young urban workers dipped only 2 percent.

Impact of Region and Race

Since a disproportionate share of the rural population is located in the South, it is necessary to determine whether rural/urban differences in marriage and childbearing are partly a product of that regional concentration. Over one-third (37 percent) of those graduating from rural high schools in 1980 were in the South. Closer examination of the data shows that being from the South accounts for some, but by no means all, of the differences between rural and urban family formation patterns.

The marriage and childbearing patterns of young people in the South do appear different from the rest of the country. Those who graduated from either rural or urban high schools in the South were more likely to have a child (regardless of marital status) and they were less likely to be unmarried

and childless. Taking rural and urban youth together, one-third of those from the South but less than one-fourth of those in the North and West had a child by 1986. While nearly half of southern youths who graduated from high school in 1980 had married by 1986, less than two-fifths of their counterparts in the North and West had married by then.

Even within the South, however, the experiences of rural and urban youth differ, as Table 1 shows. While 47 percent of urban youth in the South were unmarried and childless six years after graduation, only 40 percent of rural southern youth were in that situation. At the same time, 30 percent of rural southern youth were married with a child, compared with only 20 percent of those who graduated from an urban high school.

The data also reveal racial differences

Table 1. Rural versus Urban Patterns of Family Formation in Different Regions

	Rural		Urban	
	South	North & West	South	North & West
Married, has child	30%	24%	20%	15%
Married, childless	22	24	23	19
Unmarried, has child	8	4	9	5
Unmarried, childless	40	47	47	61
Total	100%	100%	100%	100%
(Weighted N, in thousands)	(349)	(593)	(576)	(1,499)

Note. High school graduating class of 1980, six years later (1986). Columns may not sum to 100 percent due to rounding.

Source. PRB Analysis of *High School and Beyond* data set from the U.S. Department of Education.

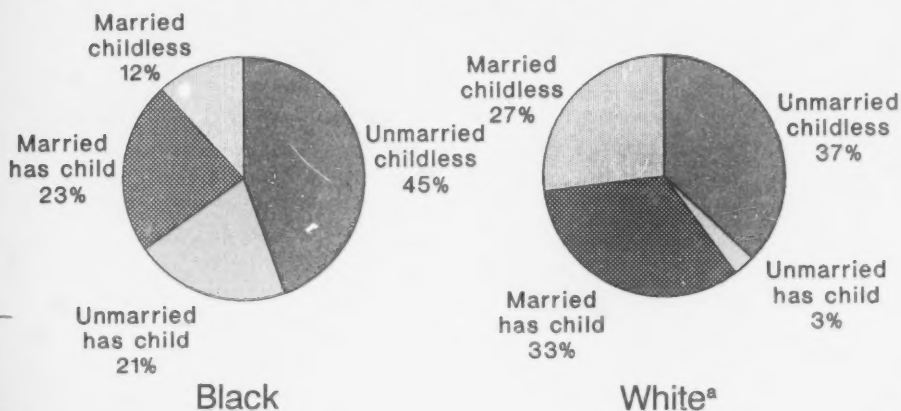
tials within the rural South (Figure 2). However, percentage point estimates should be read cautiously because of the small sample size of these subgroups. Whites appear more likely than blacks to be married: 60 percent for whites compared with 35 percent for blacks. Only 3 percent of whites but 21 percent of blacks were unmarried parents. Among those rural high school graduates in the South who had children by 1986, nearly half of the blacks were unmarried compared to less than one-tenth of whites. Of those southern rural youth who were married, blacks were more likely to have a child. About two-thirds of married blacks had a child compared to 55 percent of married whites. A greater share of young black high school graduates in rural areas remained single and childless than white high school graduates (45 percent for blacks compared with 37 percent for whites).

Conclusion

The timing of marriage and parenthood affect the educational and career prospects of young adults. The pattern of earlier marriage and parenthood among rural members of the high school class of 1980—evident by 1986—

Continued on page 9

Figure 2. Racial Differences in Marriage and Parenthood among Graduates of High Schools in the Rural South



^a Includes non-Hispanic whites only.

Note. High school graduating class of 1980, six years later. Percentages may not sum to 100 due to rounding.

Source. PRB analysis of *High School and Beyond* data set from the U.S. Department of Education

USAID's Cooperating Agencies Meet

The U.S. Agency for International Development's (AID) Office of Population held its seventh annual Cooperating Agencies Meeting November 26-28, 1990. Sessions covered such wide-ranging topics as contraceptive technologies and links between population and the environment. Almost 500 people representing population, family planning and environmental organizations attended the three-day meetings, all with the common purpose of mapping future directions for population assistance to developing nations.

Richard Bissell, assistant administrator of AID's Bureau of Science and Technology, opened the meeting by calling for more private sector involvement in family planning to meet the rising demand that cannot be borne by the donor community alone. AID's top administrator—Ronald Roskens lauded the population community as

"the front-line troops" of international development efforts.

In a colorful keynote address, Michael Robinson, director of the National Zoo, explained how population growth threatens the tropical ecosystems that play host to over 90 percent of known animal species. Duff Gillespie, agency director for population, highlighted the importance of risk-taking in family planning programs, for example, initiating programs in areas initially indifferent or even hostile to family planning.

Halldan Mahler, secretary general of the International Planned Parenthood Federation, added a sense of moral weight to the deliberations, exhorting participants to crusade for greater population assistance, for the well-being of mothers and children and for the future of the planet.

"Breakout" sessions and small group

discussions explored contraceptive method mix, evaluation and operations research, cultural barriers, AIDS and condoms, communications, and the quality of care.

The meetings culminated with a field trip to Capitol Hill to hear a panel of congressional staff members discuss population issues. Two messages clearly emerged: that House members need concrete evidence to show that 1) family planning works; and 2) dollar-for-dollar, population programs are equally or more effective compared to other types of development assistance. It also became clear that population organizations have not been successful enough in communicating the message that family planning is one of the biggest success stories in the 1980s—a decade that some characterize as "lost" for development.

—A. de S.

Upcoming Conferences

- The 1991 annual meeting of the **Population Association of America** will take place March 21-23, at the Omni Shoreham Hotel in Washington, D.C. Contact the PAA, 1722 N Street, N.W., Washington, D.C., 20036, (202) 429-0891.

- **Census Bureau Annual Research Conference**, March 17-20. Holiday Inn Crowne Plaza in Arlington, Virginia (close to Washington, D.C.'s National Airport). Contact Maxine Anderson-Brown, ARC Conference Coordinator, Office of the Director, Bureau of the Census, Washington, D.C., 20233, (301) 763-1150.

- The **Fourth Annual Hunger Research Briefing and Exchange** will be held at Brown University in Providence, Rhode Island, on April 3-5. The briefing is cosponsored by the Alan Shawn Feinstein World Hunger Program and Interaction, the American Council for Voluntary International Action. Contact Brown University, Box 1831, Providence, R.I., 02912, (401) 863-2700.

SOFTWARE

IPSS (Interactive Population Statistical System) is a powerful but extremely user-friendly projection-simulation package, featuring dazzling graphics, easy data input, and useful modelling options. It can be used for research and presentation in a variety of settings and comes bundled with demographic data for the 50 U.S. states and selected countries.

IPSS calculates cohort component projections and simulations, creates life table analyses, and a vast array of related statistics. Projections and life-tables are based on five-year, age-specific fertility rates, survival rates, and net immigration counts. Easy modifications produce output based on user-defined conditions.

No other software matches IPSS' graphics. One can produce 2-D or 3-D bar graphs, population pyramids, and life graphs for 30 different statistics in selected

formats, and eyeball alternative outcomes at the click of the mouse! Graphs are displayed in color or black and white and are produced on standard output devices for publication or presentation. Data can be keyed in, transferred from spreadsheet programs, or "drawn" on the screen.

The excellent documentation includes useful tutorials. IPSS will run on all Apple Macintoshes with at least Mac Plus capabilities, two 800K disk drives, or hard disk. (IPSS Plus, a faster version, requires a 68020/030 math coprocessor.) IPSS lists for \$295 (\$395 for IPSS Plus), with a video demonstration package for \$15. Contact: PSRC Software, Bowling Green State University, Bowling Green, Ohio 43403. Phone: (419) 372-8648.

—William H. Frey
Population Studies Center
University of Michigan

Robert Cook (1898-1991)

Robert Cook, pioneer in the population field and former president of the Population Reference Bureau, died early this year at the age of 92.

Mr. Cook served as editor of the *Journal of Heredity* of the American Genetic Association from 1922 to 1962. There he helped shape the infant science of genetics, working with such prominent figures as Alexander Graham Bell and Julian Huxley. During the 1930s he began to work with PRB's founder, Guy Irving Burch, and when Burch died in 1951, Robert Cook became PRB's director. He served as its director and president until his retirement in 1968, after which he continued work as a private consultant. He also lectured in genetics at George Washington University Medical School.

In the 1930s, Mr. Cook wrote about the dangers of overpopulation, one of the first analysts to do so. His 1951 book, *Human Fertility: The Modern Dilemma*, called uncontrolled fertility as "ominous" a force as the atom bomb. In 1955, he was co-recipient of the prestigious Albert and Mary Lasker Foundation award for "outstanding contributions to wider understanding of the world population problem."

Rural families

Continued from page 7

will have an impact on their lives as they now begin to turn 30 and, indeed, for the rest of their lives.

There is another point to note as well. Commentators on the American scene often note that the mass culture of television and movies, our extensive highway system, and marketing of the same products all over the country have tended to smooth over regional and local differences. It is interesting to realize then, that rural young people differ measurably from their urban counterparts in something as fundamental as the timing of marriage and having children.

ADDENDA

Census methodology: another time, another place

The Rajah of Lombok suspected that government officials were withholding part of the head taxes, and he resolved to take a census, to check the number of people in his land. *But the difficulty was how to get this census. He could not go himself into every village and every house, and count all the people; and if he ordered it to be done by the regular officers they would quickly understand what it was for, and the census would be sure to agree exactly with the quantity of rice he got last year.*

So the Rajah told his officials that he had a vision of impending disaster. In this vision he was told to make twelve magic krisses (ceremonial knives), using



needles collected from every village, one for each person living in that village. *And when any grievous disease appeared in any village, one of the sacred krisses should be sent there; and if every house in that village had sent the right number of needles, the disease would immediately cease; but if the number of needles sent had not been exact, the kris would have no virtue.* Before long the Rajah was able to ensure that the tax collections were full and correct. His census had fulfilled its objectives.

—Terence H. Hull

Italics indicate text from Alfred Russel Wallace, "Lombok: How the Rajah Took the Census," in The Malay Archipelago. London: Macmillan and Co., 1874.

POPULATION UPDATE

Estimated United States Population:

As of April 1, 1990	249,632,692 ^a
As of April 1, 1989	247,072,000 ^b

^aCensus figure that includes military and civilian employees and dependents overseas.
^bPRB estimate based on 1990 census total and reported births, deaths, and immigration during the 1989-1990 period.

Estimated World Population:

As of February 1991	5,375,000,000
Annual growth	93,000,000

Extrapolation from the mid-1990 population on PRB's 1990 *World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: September 1990

Item	12 months ending with September					
	Number		Rate			
	1990	1989	1990	1989	1988	1987
Live births	4,145,000	3,981,000	16.6	16.1	15.9	15.6
Deaths	2,174,000	2,142,000	8.7	8.7	8.9	8.7
Natural increase	1,971,000	1,839,000	7.9	7.4	7.0	6.9
Marriages	2,435,000	2,393,000	9.7	9.7	9.7	10.0
Divorces	1,189,000	1,159,000	4.8	4.7	4.8	4.8
Infant deaths	38,500	38,800	9.3	9.8	10.0	10.0
Population base (in millions)	...	...	250.0	247.6	245.0	242.7

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source. *Monthly Vital Statistics Report* (Vol. 39, No. 9) from the National Center for Health Statistics.

TAKE A NUMBER

Resident Population Change by State, 1980-1990

Region or state	U.S. resident population		Difference	
	1980 Census	1990 Census*	Number	Percent
UNITED STATES	226,504,825	248,709,873	+22,205,048	+9.80
NORTHEAST	49,136,667	50,809,229	+1,672,562	+3.40
Connecticut	3,107,576	3,287,116	+179,540	+5.78
Maine	1,124,660	1,227,928	+103,268	+9.18
Massachusetts	5,737,037	6,016,425	+279,388	+4.87
New Hampshire	920,610	1,109,252	+188,642	+20.49
New Jersey	7,364,158	7,730,188	+366,030	+4.97
New York	17,557,288	17,990,455	+433,167	+2.47
Pennsylvania	11,866,728	11,881,643	+14,915	+0.13
Rhode Island	947,154	1,003,464	+56,310	+5.95
Vermont	511,456	562,758	+51,302	+10.03
MIDWEST	58,853,304	59,868,632	+814,828	+1.38
Illinois	11,418,461	11,430,602	+12,141	+0.11
Indiana	5,490,179	5,544,159	+53,980	+0.98
Iowa	2,913,387	2,776,755	-136,632	-4.69
Kansas	2,363,208	2,477,574	+114,366	+4.84
Michigan	9,258,344	9,295,297	+36,953	+0.40
Minnesota	4,077,148	4,375,099	+297,951	+7.31
Missouri	4,917,444	5,117,073	+199,629	+4.06
Nebraska	1,570,006	1,578,385	+8,379	+0.53
North Dakota	652,695	638,800	-13,895	-2.13
Ohio	10,797,419	10,847,115	+49,696	+0.46
South Dakota	690,178	696,004	+5,826	+0.84
Wisconsin	4,705,335	4,891,769	+186,434	+3.96
SOUTH	75,349,155	85,445,930	+10,096,775	+13.40
Alabama	3,890,061	4,040,587	+150,526	+3.87
Arkansas	2,285,513	2,350,725	+65,212	+2.85
Delaware	595,225	666,168	+70,943	+11.92
Dist. of Columbia	637,651	606,900	-30,751	-4.82
Florida	9,739,992	12,937,926	+3,197,934	+32.83
Georgia	5,464,265	6,478,216	+1,013,951	+18.56
Kentucky	3,661,433	3,685,296	+23,863	+0.65
Louisiana	4,203,972	4,219,973	+16,001	+0.38
Maryland	4,216,446	4,781,468	+565,022	+13.40
Mississippi	2,520,638	2,573,216	+52,578	+2.09
North Carolina	5,874,429	6,628,637	+754,208	+12.84
Oklahoma	3,025,266	3,145,585	+120,319	+3.98
South Carolina	3,119,208	3,486,703	+367,495	+11.78
Tennessee	4,590,750	4,877,185	+286,435	+6.24
Texas	14,228,383	16,986,510	+2,758,127	+19.38
Virginia	5,346,279	6,187,358	+841,079	+15.73
West Virginia	1,949,644	1,793,477	-156,167	-8.01
WEST	43,165,199	52,786,082	+9,620,883	+22.29
Alaska	400,481	550,043	+149,562	+37.35
Arizona	2,717,866	3,665,228	+947,362	+34.86
California	23,668,562	29,760,021	+6,091,459	+25.74
Colorado	2,888,834	3,294,394	+405,560	+14.04
Hawaii	965,000	1,108,229	+143,229	+14.84
Idaho	943,935	1,006,749	+62,814	+6.65
Montana	786,690	799,065	+12,375	+1.57
Nevada	799,184	1,201,833	+402,649	+50.38
New Mexico	1,299,968	1,515,069	+215,101	+16.55
Oregon	2,632,663	2,842,321	+209,658	+7.96
Utah	1,461,037	1,722,850	+261,813	+17.92
Washington	4,130,103	4,866,692	+736,529	+17.83
Wyoming	470,816	453,588	-17,228	-3.66

*Count subject to possible adjustment by July 15, 1991.
Source: U.S. Bureau of the Census.

PRB/USAID Internship in International Programs

PRB is pleased to announce a one-year international internship as part of its Cooperative Agreement with the U.S. Agency for International Development (AID). The intern will work both on PRB's international projects and in the Policy and Evaluation Division of AID's Office of Population. This position provides an opportunity to help with the production and distribution of population materials for policymakers in less developed countries and to gain an overview of the various issues and organizations of concern to AID.

This year-long, full-time internship starts in June or July and pays an annual salary of \$18,000-\$22,000, depending on academic background and experience.

The intern will work six months at PRB and six months at AID. In previous years, interns have researched successful family planning models, prepared background material to aid in policy formulation, helped gather materials for country-specific population policy files, and performed many other tasks.

Recent graduates at the BA or MA level are eligible. Some population or public-health related course work and some language skills, particularly French or Spanish, are preferred.

Applicants should send a letter describing their completed academic studies, their interest in the field of population, and any relevant international work. Two letters of recommendation from instructors should be sent separately.

The deadline for application is April 1, 1991. The decision will be made by May 1 and notification sent by mail. Send applications to:

International Programs Internship
Population Reference Bureau
1875 Connecticut Avenue, N.W.
Suite 520
Washington, D.C. 20009.

CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in *Current Readings*. Publishers may address review copies to Book Review Editor, POPULATION TODAY, Population Reference Bureau, 1875 Connecticut Ave., N.W., Suite 520, Washington, D.C. 20009-5728.

SLAUGHTER OF THE INNOCENTS: Coercive Birth Control in China, by John S. Aird. Washington, D.C.: American Enterprise Institute for Public Policy, 1990. 196 pgs. \$16.95. ISBN 0-8447303-8.

All demographers and social scientists interested in issues pertaining to China, or to family planning, or to both, should become familiar with the arguments in this controversial, polemical, and clearly adversarial book. Written by an esteemed population scholar and former senior research specialist on China at the U.S. Census Bureau, the book's first sentence exemplifies its orientation: "China's birth control program has earned a worldwide reputation as the most draconian since King Herod's slaughter of the innocents."

Aird argues that since the beginnings of China's major fertility reduction campaigns in the early 1970s, and especially since the start of the one-child campaign in 1979, family planning programs have been characterized by outright coercion. He sees these programs as yet another example of China's continuing disregard for human rights.

Aird urges that it is now "time for a careful review of the issue of human rights in family planning and a reconsideration of the 'population crisis' ideology which is undoubtedly part of the explanation for the tolerance that family planning advocates and other humanitarians have shown toward China's use of coercion in family planning." This point seems to be particularly meant to chastise

those who disagree with his interpretation.

The core of the book is a review of birth control policy in China between 1949 and 1983. Many demographers may recognize sections from his earlier publications. Aird writes that China reached the peak of coercion in 1983, when various official circulars were marked by hard-line statements such as "propaganda month activities must be carried out solidly and stress must be put on practical results," and "women of childbearing age with one child must be fitted with IUDs."

But party documents in 1984 sent "confusing signals," Aird says. First, there was a call for the moderation of family planning tactics, while continuing to require the same target (1.2 billion population in the year 2000) as in 1983. A clarification followed, writes Aird, stating that the "wishes of the masses must not be allowed to deter family planning work" because of the pressures of "grim reality."

Aird presents a top-down, "cycles-of-coercion" model of family planning in China, in which the central authorities force an unpopular birth control policy upon an unwilling populace until the opposition becomes so strong that a relaxation of the policy occurs. This relaxation, however, leads to an unallowable number of births and then, cyclically, to another wave of coercion.

Aird's approach has been criticized by demographer Susan Greenhalgh (see "The Evolution of the One-Child Policy in Shaanxi Province, 1979-88," Working Paper No. 5, Population Council, 1989). As she sees it, the mandates of an unpopular policy relax over time and the mechanisms for enforcing the regulations become weakened, resulting in a more moderate *de facto* policy. She sees cadres at the local level as having considerable influence in developing as well as enforcing fertility policies. She also

faults Aird for an over-reliance on policy statements, rather than tempering them with evidence of how the policies are actually implemented.

I urge those who read the Aird book to also read Greenhalgh's work, which, in many ways is a more balanced and politically astute perspective. Aird's book should be read, however, if only to be aware of its arguments and implications.

—Dudley L. Poston, Jr.
Department of Rural Sociology
Cornell University

POPULATION POLICY, CONTEMPORARY ISSUES, edited by Godfrey Roberts. New York: Praeger Publishers, 1990. 216 pgs. \$42.95. ISBN 0-275-93039-4.

This rich collection of papers thoughtfully discusses the development of population policy in the last two decades, particularly in the less developed countries. Topics include the interactions among legal issues, human rights, and population policy; ethical issues of population control; and the population "establishment" in the United States.

More than half of the volume is devoted to country studies, which explore the range of programs that countries have used to moderate their population growth. Many of the essays focus on Asia, which has been most active in the development and implementation of population policy. But the book provides a geographic balance by analyzing the experiences of Brazil, Mexico, Colombia, and African nations. Concluding chapters assess the roles of the World Bank and United Nations in shaping population policy among less developed countries.

—Nazy Roudi

SPOTLIGHT

NEW CALEDONIA

Population (1989 census): 164,200
 Land Area: 19,103 sq. km.
 Population Density: 8.5 persons/sq. km.
 Births per 1,000 Population: 23.7
 Deaths per 1,000 Population: 5.9
 Rate of Natural Increase: 1.8 percent
 Total Fertility Rate: 2.9
 Infant Mortality Rate (reported): 11
 deaths per 1,000 live births
 Life Expectancy at Birth: 70.4 years
 GNP per Capita: \$10,134
 Main Town: Noumea

by Jean Louis Rallu

Despite its isolated location, lying off the east coast of Australia in the South Pacific, this French overseas territory has been a country of immigration since the mid-19th century. As a result, native Melanesians make up less than half (45 percent) of the total population. Migrants to New Caledonia include: French (34 percent of the population, of which more than half were born in New Caledonia), Wallis Islanders (9 percent), Tahitians (3 percent), Indonesians (4 percent), and Vietnamese and other (5 percent).

The country is mountainous with a tropical climate. In many respects, New Caledonia is a highly developed country, with a per capita GNP that falls between that of New Zealand and Australia. Nickel mining and services make up three-fourths of the GNP. Nonetheless, most native Melanesians live primarily from subsistence farming and experience severe underem-

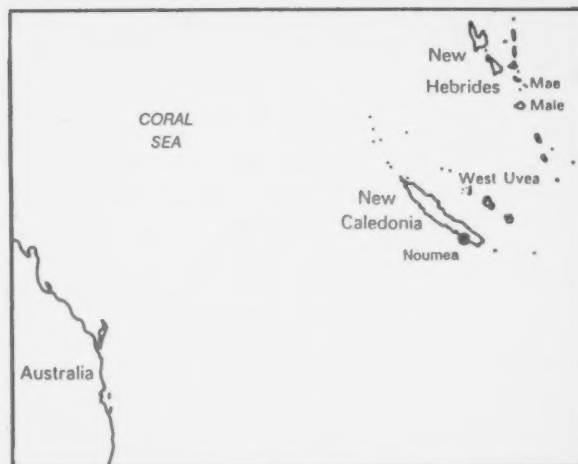
ployment.

Almost all the population speaks and writes French. Nearly all primary school-age children and more than half of youth age 10-19 attend school.

About 60 percent of all residents live in Greater Noumea, the main town. The urban population has been increasing rapidly at 2.3 percent each year since 1983. Yet despite sharp urban-rural differences, New Caledonia has succeeded in reducing fertility and infant mortality even in the countryside, while life expectancy at birth is the highest of the small islands of the South Pacific.

The fertility of the population as a whole declined from 3.3 lifetime births per woman in 1983 to 2.9 in 1989. Fertility rates differed, however, among population groups. In 1983 (the most recent year for birth and death data by ethnicity), the total fertility rate (TFR) of the Melanesians was 4.4 lifetime births per woman and probably fell below 4.0 in 1989. The fertility of Wallis Islanders (TFR=3.9) and Tahitians (TFR=2.6) is also declining rapidly.

The Europeans and Asians are aging populations while Oceanians are young populations. Of the country's total population 43 percent is under 20 years old, with 7 percent over 60



years old. The population over age 60 is expected to grow from 6.9 percent in 1989 to 11.6 percent by 2010.

Migration is a key, but inconstant, factor in population growth. Migration, which accounted for twice as much growth as did natural increase between 1968 and 1972, accounted for only half as much growth as natural increase in the 1976-1980 period. Between the 1983 and 1989 censuses, migration flows were slightly positive. If we assume a net balance between immigration and emigration, population growth would reach 199,000 inhabitants in the year 2000, and 228,000 in 2010.

Jean Louis Rallu is research associate at L'Institut national d'études démographiques in Paris.

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